



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,278	09/19/2003	Hideo Morimoto	07700.042001	5463

7590 04/04/2006

Jonathan P. Osha
Rosenthal & Osha L.L.P.
1 Houston Center, Suite 2800
1221 McKinney Avenue
Houston, TX 77010

EXAMINER

DAVIS, OCTAVIA L

ART UNIT	PAPER NUMBER
----------	--------------

2855

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,278

Applicant(s)

MORIMOTO, HIDEO

Examiner

Octavia Davis

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/17/06.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-7 and 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 – 7 and 13 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onose et al (6,640,642) in view of Okada et al (6,809,529).

Regarding claims 2 and 4, Onose et al disclose a capacitance type pressure sensor comprising a plurality of sensors arranged in a matrix (See Fig. 1), flexible film portions 7 configured to partition at least two of the plurality of sensors from each other (See Col. 4, lines 37 - 43), a cover layer 20 configured to cover the plurality of sensors (See Col. 6, lines 16 – 25), a pressure sensitive film 4 located between the electrodes 3 and 6 (See Col. 4, lines 29 – 33, See Fig. 5) and the sensors detecting the pressure applied to the cover 20 with enhanced accuracy but does not disclose at least one of the plurality of sensors comprising a plurality of first electrodes corresponding to a plurality of directions, respectively, and a second electrode supported by the elastic supporting member and facing the plurality of first electrodes such that capacitance elements are formed by the plurality of first electrodes and the second electrode and wherein the second electrode is configured to be displaceable toward the plurality of first electrodes when an external force is applied thereto, the sensors identifying the external force in a multidimensional direction on the basis of detection of changes in capacitance of the capacitance elements caused by changes in distances between the

Art Unit: 2855

plurality of first electrodes and the second electrode and a pressure sensitive resistive member arranged between the plurality of electrodes. However, Okada et al disclose a force detector comprising a plurality of first electrodes E11 – E14 corresponding to a plurality of directions, respectively, and a second electrode(s) E15 – E18 supported by an elastic supporting member 20 and facing the plurality of first electrodes such that capacitance elements C11 – C14 are formed by the plurality of first electrodes and the second electrode and wherein the second electrode(s) E15 – E16 are configured to be displaceable toward the plurality of first electrodes E11 – E14 when an external force is applied thereto (See Col. 15, lines 14 – 35), the sensors identifying the external force in a multidimensional direction on the basis of detection of changes in capacitance of the capacitance elements caused by changes in distances between the plurality of first electrodes and the second electrode (See Col. 15, lines 48 – 62).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Onose et al in view of Okada et al for the purpose of, utilizing a force detector having a function for detecting a strength of an applied external force and that uses capacitance elements or variable resistance elements wherein power consumption can be efficiently suppressed (See Okada et al, Col. 2, lines 52 – 58).

Regarding claims 3, 16 and 18, Onose et al disclose all of the limitations of these claims except for a third electrode grounded and arranged in a proximity of the first electrodes and the second electrode comprises a protrusion to contact the third electrode with the changes in capacitance being detected using the signal that is input to the first electrodes when the second electrode contacts the third electrode. However, in Okada et al, a third electrode E15 is grounded and arranged in a proximity of first electrodes E11 – E14 and the second electrode(s) E16 comprises a protrusion P1, P2 (See Fig. 14) to contact the third electrode E15.

Art Unit: 2855

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Onose et al in view of Okada et al for the purpose of, providing an insensitive zone to prevent a change in capacitance value from being outputted as a detected value unless an operational input applied to the operation panel has a predetermined strength or more (See Okada et al, Col. 26, lines 5 – 17).

Regarding claims 5 – 7, in Onose et al, a member 9 filled with a material and formed with a cavity 8 is disposed between the cover layer 20 and the second electrode 6 (See Col. 3, lines 43 - 51).

Regarding claims 13 - 15, in Onose et al, a surface of the cover layer 20 not subjected to a force includes no projections and depressions (See Fig. 3).

Regarding claim 17, in Onose et al, the insulating layer 4 covers the first electrodes 3 (See Col. 3, lines 29 – 33, See Fig. 7).

Response to Arguments

3. Applicant's arguments with respect to these claims have been considered but are moot in view of the new grounds of rejection.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Okada (5,392,658) discloses a detector for force, acceleration or magnetism with respect to components in multi-dimensional directions.

Hartwell et al (6,504,385) disclose a three axis motion sensor.

Art Unit: 2855

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Octavia Davis whose telephone number is 571-272-2176. The examiner can normally be reached on Mon through Thurs from 9 to 5. The examiner can also be reached on alternate Fridays.

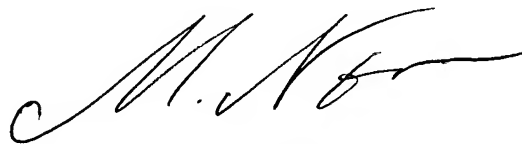
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



OD/2855

3/28/06



MAX NOORI
PRIMARY EXAMINER